

Economic Statistics (Econ 121) Syllabus

Luke Miller

Summer 2023, Session I

Instructor Information

Luke Miller

Email: lm1410@georgetown.edu

Office Hours: Wednesday 2:00 pm - 3:00 pm (second floor of Lauinger Library),
or by appointment

Teaching Assistant

TBD

Email: TBD

Office Hours: TBD

Class Information

Lectures: Monday - Thursday from 3:30 pm - 5:35 pm.

Location: Reiss 284

Recitation: Wednesday from 7:00 pm - 9:00 pm.

Location: Car Barn 301

Course Description

Welcome to our exploration of statistics and economics! This course provides a comprehensive overview of descriptive statistics and probability theory before delving into the subject of statistical inference. You'll acquire the necessary foundation for Introduction to Econometrics (Econ 122). Topics include probability theory, descriptive statistics, estimation, hypothesis testing and confidence intervals. Throughout the course, we will use STATA, a statistical software, to better understand the topics. We'll also have hands-on experience with electronic data acquisition and analysis. Our weekly lab sessions provide an opportunity for you to discuss homework assignments and practice using computer software.

Course Objectives

By the end of this course, students will be able to:

- Understand and apply basic concepts of probability and statistics
- Analyze and interpret economic data using descriptive statistics
- Estimate population parameters and test hypotheses using sample data
- Construct and interpret confidence intervals for population parameters
- Use STATA to perform basic data analysis tasks

Prerequisites

This course requires a basic understanding of calculus. For those who may need a refresher, a review of the necessary concepts will be provided at the beginning of the semester. The review will cover topics such as limits, derivatives and integrals to ensure that everyone has a solid foundation for the course material.

Textbook

The required textbook for this course is "Probability and Statistical Inference", 10th edition, by Tanis, Hogg and Zimmerman (9th edition will also work).

Grading Policy

Grades will be based on the following components:

- Problem Sets (20%) - Due weekly. Half of the points will be based on effort and half of the points will be based on accuracy for a randomly selected question.
- Midterm exam (30%) - June 20th, 2023
- Final exam (50%) - July 6th, 2023

Exam Attendance Policy

Attendance at exams is mandatory. Make-up exams will only be given in the case of a documented university approved absence or exceptional circumstances such as a verified family emergency or verified illness. It is the student's responsibility to provide documentation and notify the instructor in advance. Failure to do so will result in a 0 for the exam.

Honor Code

A student found to have violated the Georgetown Honor Code will receive a grade of F and any additional penalties imposed by the Honor Council: <http://gervaseprograms.georgetown.edu/honor/> No electronic devices are allowed during exams.

Course Schedule

This course runs from June 5th to July 7th, 2023. The following is a tentative schedule of the topics and corresponding chapters we will cover each week:

- Week 1 (June 5 - June 8): Ch. 1 - Probability
- Week 2 (June 12 - June 15): Ch. 2 - Discrete Distributions and Ch. 3 - Continuous Distributions
- Week 3 (June 21 - June 22): Ch.4 - Bivariate Distributions and Ch.5- Distributions of Functions of Random Variables
- Week 4 (June 26 - June 29): Ch.6 - Point Estimation and Ch.7- Interval Estimation
- Week 5 (July 3 - July 6): Ch.8 - Tests of Statistical Hypotheses

Please note that this schedule is subject to change based on the progress of the class.

Title IX Syllabus Statement

Georgetown University and its faculty are committed to supporting survivors and those impacted by sexual misconduct, which includes sexual assault, sexual harassment, relationship violence, and stalking. Georgetown requires faculty members, unless otherwise designated as confidential, to report all disclosures of sexual misconduct to the University Title IX Coordinator or a Deputy Title IX Coordinator. If you disclose an incident of sexual misconduct to a professor in or outside of the classroom (with the exception of disclosures in papers), that faculty member must report the incident to the Title IX Coordinator or Deputy Title IX Coordinator. The coordinator will, in turn, reach out to the student to provide support, resources and the option to meet. [Please note that the student is not required to meet with the Title IX coordinator.] More information about reporting options and resources can be found on the Sexual Misconduct Website: <https://sexualassault.georgetown.edu/resourcecenter>.

If you would prefer to speak to someone confidentially, Georgetown has a number of fully confidential professional resources that can provide support and assistance. These resources include:

- Health Education Services for Sexual Assault Response and Prevention: confidential email sarp@georgetown.edu
- Counseling and Psychiatric Services (CAPS): 202.687.6985 or after hours call (833) 960-3006 to reach Fonemed a telehealth service; individuals may ask for the on-call CAPS clinician

More information about reporting options and resources can be found on the Sexual Misconduct Website.

(Above statement and TIX faculty resources found at: <https://sexualassault.georgetown.edu/get-help/guidance-for-faculty-and-staff-on-how-to-support-students/>)

Title IX Pregnancy Modifications and Adjustments

Georgetown University is committed to creating an accessible and inclusive environment for pregnant students. At any point throughout their pregnancy students may request adjustments/modifications based on general pregnancy needs or accommodations based on a pregnancy-related complication or medical need. Students may also request accommodations following labor and delivery based on a complication or medical need.

SCS students must complete the Pregnancy Adjustment Request Form (<https://titleix.georgetown.edu/title-ix-pregnancy/student-pregnancy/>) and submit it to the SCS Deputy Title IX Coordinator at titleixscs@georgetown.edu. Upon receiving the completed form, the Deputy Title IX Coordinator will schedule a meeting with the student to discuss the requested adjustments and implementation process.

More information about pregnancy modifications can be found on the Title IX at Georgetown University Website.